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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/767,043	01/29/2004	Michael Robert Burke	ROC9200300351US1	4830
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Grant A. Johnson IBM Corporation, Dept. 917 3605 Highway 52 North Rochester, MN 55901-7829				
EXAMINER				
PARK, JEONG S				
ART UNIT		PAPER NUMBER		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/767,043

Applicant(s)

BURKE ET AL.

Examiner

JEONG S. PARK

Art Unit

2454

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 September 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-8,10-19 and 22-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-8,10-19 and 22-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9/26/2008 has been entered.

Claim Objections

2. The amendment presented on 9/26/2008 providing change to the claims is noted. All prior objections to the claims are hereby withdrawn.

Claim Rejections - 35 USC § 112

3. The amendment presented on 9/26/2008 providing change to the claims obviates the outstanding 35 USC 112 rejections, and they are hereby withdrawn.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-3, 5-8, 10-12, 15-19 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bhogi et al. (hereinafter Bhogi)(U.S. Pub. No. 2004/0088413 A1) in view of Yamada et al. (hereinafter Yamada)(U.S. Patent No. 5,365,582).

Regarding claims 1, 18 and 19, Bhogi teaches as follows:

a method of configuring a server computer having a connection pool (a dynamically configurable resource pool used in a connection pool for server systems, see, e.g., abstract), comprising:

initializing a connection pool (a initial connection pool size is used to determine the number of connections that the connection pool manager will generate upon initialization of the connection pool, see, e.g., page 5, paragraph [0040]);

generating heuristic override information (requestor (110 in figure 1) generates a request to change the configuration of the resource pool 100 in figure 1, see, e.g., page 3, paragraph [0025], lines 8-11), wherein the heuristic override information comprises a plurality of rules that specify a time period and a maximum number of connections (maximum pool size, see, e.g., page 5, paragraph [0040], lines 21-25) for that time period (requestor requests configuration change at the current time, see, e.g., page 3, paragraph [0025] and the main unit holds the requested configuration change and asynchronously update the configuration when the resource pool reaches a safe point, see, e.g., page 5, paragraph [0041]);

receiving a heuristic timer interrupt event (receiving request to change maximum number of connections 600 in figure 6, see, e.g., page 5, paragraph [0042]);

in response to the heuristic timer interrupt event (configuration change request is interpreted as the heuristic timer interrupt event, see, e.g., page 4, paragraph [0030]);

determining a current time of day (whenever the requestor 110 in figure 1 generates the request change of configuration it is inherent to have the record of the requested time of day);

determining a connection current pool size (request for current connection pool statistics by providing current values for connection pool usage parameters such as total number of connections in the pool and total number of connections in use, see, e.g., page 4, paragraph [0031]); and

adding new connections to the connection pool if the current connection pool size is less than the than the specified maximum number of connections associated with the current time of day (establish connection, see, e.g., page 6, paragraph [0048] and steps 810 and 815 in figure 8).

Bhogi teaches all the limitations of claim with a dynamic reconfiguration request to change the maximum number of connections at the current time as presented above instead of requesting reconfiguration at pending time as scheduling the maximum number of connections for certain period of time.

Yamada teaches the deficiency of requesting a scheduled reconfiguration as follows:

a maximum connection number management table with the maximum number of connection defined for each time period (see, e.g., col. 12, lines 12-23); and

the maximum number of connections corresponding to the present time period is read from the pattern data corresponding to the pattern (see, e.g., col. 12, lines 24-37).

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Bhogi to include requesting a scheduled reconfiguration as taught by Yamada in order to automatically change the maximum number of connections based on the predetermined schedule.

Regarding claims 2 and 3, Bhogi teaches as follows:

the connection pool is initialized using a plurality of initial settings wherein the plurality of initial settings comprises a maximum number of connections (a initial connection pool size is used to determine the number of connections that the connection pool manager will generate upon initialization of the connection pool, see, e.g., page 5, paragraph [0040], lines 18-21).

Regarding claims 5 and 6, Bhogi teaches as follows:

the heuristic override information comprises a heuristic override setting and a time period, wherein the heuristic override setting comprises a maximum number of connections (interpreted as a maximum pool size, see, e.g., page 5, paragraph [0040], lines 21-25), wherein the time period comprises at least one of a time of day, a day of week, and a day of year (whenever the requestor 110 in figure 1 generates the request change of configuration it is inherent to have the record of the requested time of day).

Regarding claims 7 and 15-17, Bhogi teaches as follows:

a method of operating a server, comprising:

initializing a connection pool with an initial maximum number of connections (a initial connection pool size is used to determine the number of connections that the connection pool manager will generate upon initialization of the connection pool, see,

e.g., page 5, paragraph [0040]);

applying heuristic information (interpreted as configuration parameters, see, e.g., page 5, paragraph [0040])(requestor 110 in figure 1, which is a component of the server 140 in figure 1, generates a request to change the configuration of the resource pool 100 in figure 1, see, e.g., page 3, paragraph [0025], lines 8-11) to modify the maximum number of connections (the main unit 240 in figure 2 implements the requested new configuration upon receiving a configuration change request while current resource utilization continues undisturbed, see, e.g., page 5, paragraph [0041], lines 1-10), wherein the heuristic override information comprises a heuristic override and a time period associated with the override (requestor requests configuration change at the current time, see, e.g., page 3, paragraph [0025] and the main unit holds the requested configuration change and asynchronously update the configuration when the resource pool reaches a safe point, see, e.g., page 5, paragraph [0041]);

in response to receiving a request to connect (connection requests, see, e.g., page 4, paragraph [0030]):

detecting a current number of connections (request for current connection pool statistics by providing current values for connection pool usage parameters such as total number of connections in the pool and total number of connections in use, see, e.g., page 4, paragraph [0031]);

determining a current time of day (whenever the requestor 110 in figure 1 generates the request change of configuration it is inherent to have the record of the requested time of day); and

if the current number of connections is less than the modified maximum number of connections for the time period associated with the current time of day, creating a new connection (establish connection, see, e.g., page 6, paragraph [0048] and steps 810 and 815 in figure 8).

Bhogi teaches all the limitations of claim with a dynamic reconfiguration request to change the maximum number of connections at the current time as presented above instead of requesting reconfiguration at pending time as scheduling the maximum number of connections for certain period of time.

Yamada teaches the deficiency of requesting a scheduled reconfiguration as follows:

a maximum connection number management table with the maximum number of connection defined for each time period (see, e.g., col. 12, lines 12-23); and

the maximum number of connections corresponding to the present time period is read from the pattern data corresponding to the pattern (see, e.g., col. 12, lines 24-37).

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Bhogi to include requesting a scheduled reconfiguration as taught by Yamada in order to automatically change the maximum number of connections based on the predetermined schedule.

Regarding claim 8, Bhogi teaches as follows:

detecting a connection having an unused time (idle time) greater than a time-out value (connection idle time) and deleting the connection (see, e.g., page 6, paragraph [0052], lines 27-33).

Regarding claim 10, Bhogi teaches as follows:

in response to receiving a request to connect, resetting an unused time (maximum idle connection time parameter, see, e.g., page 5, paragraph [0040], lines 31-34) associated with every available connections (it is inherent to reset the idle connection time when receiving connection request).

Regarding claim 11, Bhogi teaches as follows:

if the current number of connections is greater than or equal to the maximum number of connections, waiting for a connection to become available (the current pool size is equal to the maximum pool size then the wait queue unit 250 in figure 2 places the request for connection on the wait queue, see, e.g., page 6, paragraph [0049] and figure 8 step 810, 840, 845, 850 and 855).

Regarding claim 12, Bhogi teaches as follows:

in response to receiving a close connection request for a connection, indicating the connection as available (when a connection is returned to the connection pool, the connection is available for the connection request waiting in the wait queue unit 250 in figure 2, see, e.g., page 6, paragraph [0049]).

Regarding claim 22, Bhogi teaches as follows:

in response to the heuristic interrupt event (interpreted as a configuration request event), initializing a timeout value for all available connections in the connection pool (maximum idle connection time parameter is reset upon the configuration request, see, e.g., page 5, paragraph [0040], lines 31-34).

6. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bhogi et al. (hereinafter Bhogi)(U.S. Pub. No. 2004/0088413 A1) in view of Yamada et al. (hereinafter Yamada)(U.S. Patent No. 5,365,582) as applied to claim 7 above, and further in view of Mousseau et al. (hereinafter Mousseau)(U.S. Pub. No. 2004/0078495 A1).

Regarding claim 13, Bhogi teaches all the limitations of claim except for teaching of Java Database Connectivity connections.

Mousseau teaches as follows:

The Java Database Connectivity (JDBC) component can configure and manage database connectivity such as data sources and connection pools, see, e.g., page 12, paragraph [0153] and [0154]).

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Bhogi in view of Yamada to include JDBC for database connectivity with connection pools as taught by Mousseau in order to efficiently and securely connect the clients to the database via the connection pool.

7. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bhogi et al. (hereinafter Bhogi)(U.S. Pub. No. 2004/0088413 A1) in view of Yamada et al. (hereinafter Yamada)(U.S. Patent No. 5,365,582) as applied to claim 7 above, and further in view of Chong et al. (hereinafter Chong)(U.S. Pub. No. 2004/0064552 A1).

Regarding claim 14, Bhogi teaches all the limitations of claim except for teaching of Java 2 Connector connections.

Chong teaches as follows:

The J2C pool is used for physical connections (see, e.g., page 5, paragraph [0062]).

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Bhogi in view of Yamada to include J2C connection for database connectivity with connection pools as taught by Chong in order to efficiently and securely connect the clients to the database via the connection pool.

8. Claims 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bhogi et al. (hereinafter Bhogi)(U.S. Pub. No. 2004/0088413 A1) in view of Yamada et al. (hereinafter Yamada)(U.S. Patent No. 5,365,582) as applied to claim 1 above, and further in view of Desai (U.S. Pub. No. 2004/0221031 A1).

Regarding claim 23, Bhogi teaches as follows:

in response to a request to flush the connection pool, the main unit may destroy the connections currently in the pool and not in use (see, e.g., page 4, paragraph [0029]).

Even though setting minimum number of connections in pool when establishing connection pool is inherently included, Bhogi does not specify the minimum number of connections as one of connection pool attributes.

Desai teaches as follows:

an apparatus and method are provided of communicating between an application and a server including establishing a connection pool to the server (see, e.g., abstract);

minimum number of connections in pool (see, e.g., page 6, paragraph [0069] and 810 in figure 8);

maximum number of connections in pool (see, e.g., page 6, paragraph [0070] and 820 in figure 8); and

destroying idle connections (setting a connection timeout parameter is for removing a connection from the connection pool if the timeout parameter is satisfied, see, e.g., page 6, paragraph [0072] and 850 in figure 8).

Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention to modify Bhogi in view of Yamada to include destroying idle connections in pool based on the minimum number of connections in pool set by establishing step of the connection pool as taught by Desai in order to maintain efficient number of connections in pool.

Regarding claims 24 and 25, they are rejected for similar reason as presented above per claims 1, 18, 22 and 23.

Response to Arguments

9. Applicant's arguments filed 9/26/2008, with respect to claims 1-3, 5-8, 10-19 and 22-25 have been considered but are moot in view of the new ground(s) of rejection.

A. Summary of Applicant's Arguments

In the remarks, the applicant argues as follows:

Regarding claims 13 and 14, in Section III(A), Applicant identified a number of elements not taught or suggested by Bhogi and Yamada. Mousseau also fails to teach or suggest these elements. Instead, Mousseau is directed at a J2EE connector architecture and is silent about the details of connection pool management. Chong also

fails to teach or suggest these elements. Instead, Chong is directed at performance management and is silent about the details of connection pool management.

B. Response to Arguments:

In response to argument, Bhogi teaches details of connection pool management as presented above.

Mousseau teaches the deficiency of Bhogi of teaching of Java Database Connectivity connections as follows:

The Java Database Connectivity (JDBC) component can configure and manage database connectivity such as data sources and connection pools (see, e.g., page 12, paragraph [0153] and [0154]).

Chong teaches the deficiency of Bhogi of teaching of Java 2 Connector connections as follows:

The J2C pool is used for physical connections (see, e.g., page 5, paragraph [0062]).

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEONG S. PARK whose telephone number is (571)270-1597. The examiner can normally be reached on Monday through Friday 7:00 - 3:30 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on 571-272-1915. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. S. P./
Examiner, Art Unit 2454

October 23, 2008

/Joseph E. Avellino/
Primary Examiner, Art Unit 2446